

REMARKS

Claims 1-4, 7, 21-23 and 28-30 are pending in the present application, claims 31 and 32 having been cancelled herein.

The Office Action and cited references have been considered.

Favorable reconsideration is respectfully requested.

Applicants note with appreciation the consideration shown during the interview on February 18, 2004, with Terrel Morris, the Examiner's supervisor.

Claim 23 was objected to under 37 C.F.R. 1.75(c) as being of improper dependent form. Claim 23 has been amended to overcome this objection.

Withdrawal thereof is respectfully requested.

Claims 1-4, 7 and 21-30 were rejected under 35 U.S.C. § 112, second paragraph. Applicants have amended claims 1 and 4 to overcome this rejection.

Withdrawal thereof is respectfully requested.

Claims 1-3, 7 and 31 are rejected under 35 U.S.C. § 102(b) as being anticipated by Miyadera et al. (USP 4,446,191). Claims 1, 2, 4, 21, 23, 31 and 32 were rejected under 35 U.S.C. § 102(b) as being anticipated by Kashima et al. (USP 5,462,791). Claims 1, 2, 4, 21, 23, 28 and 30-32 were rejected under 35 U.S.C. § 102(b) as being anticipated by Leibowitz (USP 4,689,110). Claims 3, 7, 22 and 29 were rejected under 35 U.S.C. § 103 as being unpatentable over Leibowitz in view of Yuan (USP 4,020,209). Claims 28 and 29 were rejected under 35 U.S.C. § 103 as being unpatentable over Miyadera et al in view of Leibowitz. These rejections are respectfully traversed for the following reasons.

Independent claims 1 and 4 have been amended in accordance with the Examiner's suggestion in the final rejection. In particular, for example, claim 1 now recites an in-plane quasi-isotropic fiber reinforced resin composite material having a reduced or low coefficient of linear expansion that approaches substantially zero by combining sheets woven by one or more kinds of reinforcing fiber. Each coefficient of linear expansion of said sheets is controlled to be balanced by combining a matrix resin and two or more kinds of reinforcing fibers wherein the reinforcing fibers include at least one kind of reinforcing fibers having a negative coefficient of linear expansion and wherein the matrix resin is used to control the coefficient of linear expansion of the composite material such that the coefficient approaches substantially zero. A similar amendment has been made to claim 4. Applicants respectfully submit that this is not taught disclosed or made obvious by the prior art of record.

Each of the prior art references cited in the Office Action as allegedly anticipating the claimed invention discloses only controlling the coefficient of linear expansion of the material by controlling the fibers used to weave the fabric. In other words, for example, in Miyadera et al., one fiber having a negative coefficient of expansion is used and another fiber having a positive coefficient of linear expansion is used. A resin is added however, the patent does not disclose using the matrix resin to control the coefficient of linear expansion of the composite material such that the coefficient approaches substantially zero as recited in claim 1. The same is true of the Kashima et al. and Leibowitz patents.

Using the matrix resin to control the coefficient of linear expansion increases the types of fibers that can be used in the composite material. In

particular, it is now no longer necessary to use one fiber having a positive coefficient and one fiber using a negative coefficient. A plurality of fibers can be used one of which has a negative coefficient and the others of which have either positive or negative coefficients, which are balanced using the coefficient of thermal expansion of the matrix resin.

For at least this reason, Applicant respectfully submits that claims 1 and 4 are patentable over Miyadera et al., Kashima et al., and Leibwitz patents.

Claims 2-3, 7, 21-23 and 28-30 depend from and include the recitations of claims 1 and 4, respectively. Applicant further submits that the Yuan patent does not remedy the deficiencies noted above with respect to the primary references. Applicant respectfully submits that these claims are patentable in and of themselves as they depend from and include the recitations of the independent claims from which they depend.

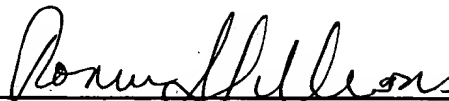
In view of the above amendments and remarks, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of record. Applicant respectfully submits that the amendment raises no new issue since the amendments are presented in accordance with the comments made by the Examiner in the final Office Action. Entry of the proposed amendments is thus respectfully requested. Applicant submits that upon entry of the proposed amendments, the application will be in condition for allowance and an early notice to this effect is most earnestly solicited.

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Amd. dated February 20, 2004
Reply to Office Action of November 20, 2003

If the Examiner has any questions, he is invited to contact the
undersigned at 202-628-5197.

Respectfully submitted,

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